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## Physical Activity of Medical and Nonmedical University Students

**Mina Shirvani**

BSc, MSc in Nursing, Shahrekord University of Medical Sciences, Shahrekord, Iran.

**Sara Shahbazi**

BSc, MSc in Nursing, Shahrekord University of Medical Sciences, Shahrekord, Iran.

**\* Mohammad Heidari** (Corresponding author)

BSc, MSc in Nursing, School of Nursing and Midwifery, Shahrekord University of Medical Sciences, Shahrekord, Iran.

Tel: +98-9131850128 E-mail: Heidari@skums.ac.ir

**Mansureh Ghodusi Borujeni**

BSc, MSc in Nursing, Shahrekord University of Medical Sciences, Shahrekord, Iran.

### Abstract

**Background:** The role of regular and contagious physical activity are widely recognized in decreases the risk of coronary heart disease, various cancers, obesity, osteoporosis and other health problems. Because investigations suggest that physical activity levels fall significantly during the period between adolescence and adulthood, there is considerable concern about youth physical activity. Since university students represent a significant sector of young adults and form a prominent sector of society from which the policy makers, their physical activities are of particular interest. The present study was carried out and compared physical activity status among Tabriz medical and nonmedical sciences university students.

**Methods:** A descriptive comparative design was carried out with 384 Tabriz medical and 384 nonmedical science university students. Data concerning demographic and physical activity variables were collected by a self reported questionnaire. Independent sample t-test were conducted to compare of mean scores of physical activity and two way ANOVA test were conducted to determine whether socio demographic variables were associated with physical activity.

**Results:** The finding study showed that 39.8% of medical and 37.2% of nonmedical science university students had risky physical activity status and only 6.5% of medical and 5.9% of nonmedical science university students had good risky physical activity status. No significant differences between mean scores of physical activity among two groups. 81.3% of medical and 85.2% of nonmedical science university students had tend to increase levels of their physical activity.

**Conclusions:** It can be concluded that both medical and nonmedical science university students did have not appropriate condition regarding to physical activity and medical science students education and training had no influenced on physical activity of medical science university students. Therefore, universities should implement programs to increase student's level of physical activity.

**Keywords:** Physical Activity, Students, University

## Introduction

Mobility and physical activity play a major role in health.<sup>1</sup> In fact, sport activities are the most important element for complete physical comfort and health and prepare the body for lifelong flexibility, power and resistance against diseases.<sup>2, 3</sup> Sport activities affect not only physical status of the body but also can positively influence other dimensions of health such as psychological and social dimensions.<sup>3,4</sup> Research shows that regular physical activity diminishes the risk of MI, colon cancer, diabetes, hypertension and CVA, and plays a key role in weight control and preservation of joints and musculoskeletal system.<sup>5,6,7</sup> It also reduces the signs of anxiety and depression and is associated with reduction of hospitalization, the number of physician visits and consumption of medications.<sup>8,9</sup> Nowadays, lack of physical activity is a major health problem.<sup>10, 11</sup>

Despite the tight association between lack of physical activity and mobility, as well as the association between occurrence of diseases and poor health, 60% of world population either does not have any physical activity or their activity is not adequate.<sup>12</sup> Based on WHO report, two million people yearly die of not having physical mobility and activities.<sup>1</sup>

Therefore, World Health Organization slogan for world health day 2002 was "move for health".<sup>13</sup> Previous studies have shown a notable decrease in level of physical activity within adolescence and adulthood. So, consideration of mobility status among the adolescents is of great importance.

University students are a major part of young population who are future man power of the society. This study aimed to investigate and compare student's physical activity in Tabriz University and Tabriz University of Medical Science.

## Methods

This is a comparative descriptive study in which university students' physical activity has been investigated and compared in Tabriz University and Tabriz University of Medical Sciences. Study population comprised all students in Tabriz University and Tabriz University of Medical Sciences. The subjects were 384 students of Tabriz University who were randomly recruited through stratified random sampling. The data were collected by a self report questionnaire including two sections. The first section contained demographic characteristics, and the second included questions on students' physical activity status. An extra question inquired the students about their desire to improve their self care level. Content validity was used to confirm the validity of the questionnaire, and Cronbach's alpha was adopted for its reliability.

The obtained data, after being coded, were analyzed by descriptive statistics to calculate concrete and percentage frequency distributions, mean and SD and independent t-test to compare mean scores of students' physical activity in Tabriz University and Tabriz University of Medical Sciences, and two-way analysis of variance to determine the association between students' personal and social characteristics and their physical activity in SPSS /15.

## Results

The results showed that most of the students in both Tabriz University and Tabriz University of Medical Sciences were male, in age group of 21-24 years, with BMI between 19.8-25 and residing in university dormitory. Most of the students in both universities watched TV for less than three hours in a day. Most of the students' fathers in Tabriz University of Medical Sciences were an employee of a non health related profession, and in Tabriz University were self employed. Most of the subjects' mothers were homemakers in both universities. Most of the subjects' in Tabriz University of Medical Sciences mentioned that educational books and TV were their source to access information about health and healthy behavior respectively. The results showed that the subjects were at a risky level of physical activity in Tabriz University of Medical Sciences (39.84%) and Tabriz University (37.24%), while 6.51% and 5.99% of the subjects were in an acceptable level of physical activity in both universities respectively. Independent t-test showed no significant difference in subjects' physical activity in both universities ( $p=0.357$ ).

The results also showed that the subjects in both universities were interested in improvement of their physical activity levels. Investigation of the association between students' demographic characteristics and the type of university, and their physical activity showed that students' physical activity mean scores were significantly different based on the type of university and BMI ( $p<0.01$ ), and type of university and students residential status ( $p<0.01$ ).

Meanwhile, the type of university had no effect on students' physical activity as their mean scores in both universities showed no significant difference.

Students' gender ( $p<0.01$ ) and BMI ( $p<0.01$ ) significantly affected their physical activity, but their other personal and social characteristics had no significant effect on their physical activity. There was also a reciprocal effect between the university and BMI ( $p<0.01$ ) and the type of university and subjects' mothers' job ( $p<0.01$ ), and their physical activity.

## Discussion

The findings of the study showed that most of the students in both universities are at a risky level concerning physical activity, and there was no significant difference in students' physical activity in both universities.

In addition, most of the students in both universities were interested in improvement of their physical activity level. In fact, more than two thirds of the students in both universities had either risky level or poor level of physical activity, which can impair their health in future.<sup>14</sup> Hadded et al in their study on comparison of Canadian and Jordanian nursing students' healthy behavior showed a significant difference in students of both universities in dimension of physical activity,<sup>15</sup> which is not consistent with the present study. Cultural and economic differences can be the reason for this difference, but Zyto et al, in their study on food habits and life style among 412 female and male students in Netherland, found out that 50% of the subjects had poor physical activity.<sup>16</sup>

Hasse et al through their study on students' life style, awareness and beliefs in 23 European countries during 1999-2001 reported that prevalence of students' immobility in their leisure time varies in various countries between 23-44% based on different cultural and economic conditions,<sup>5</sup> which concords with the present study and reveals that university students usually do not have adequate self care.

Steptoe et al in their investigation on university students' self care in 13 European countries during 1990-2000 concluded that 72% of the boys and 62% of the girls in year 1990 and 76% of the boys and 65% of the girls in year 2000 had physical exercise once in two weeks.<sup>17</sup>

Leslie in a study on Australian students reported that 46% of female students and 32% of male students were inactive concerning physical activity.<sup>18</sup>

Najem et al in a study on 835 students of New Jersey medical school showed that 68% of the subjects played sports regularly.<sup>19</sup>

### Conclusions

Overall, the risky condition of physical activity among the university students needs basic interventions to promote their level of physical activity.

As most of the university students have a sedentary life style and like to increase their level of physical activity, university authorities should warn the students of the risk of immobility as much as possible make them motivated and specify facilities to improve their self care. They should think of solutions to solve this problem among the students who are the future resources of the country as believing that sports have positive effects and taking actions toward physical activity among students, especially medical students who are the messenger of health in the society, are effective on promotion of mobility and sports among society members. On the other hand, lack of a difference between the students of these two universities concerning their physical activity shows that the education, the medical students undergo in medical schools on the benefits of physical activity and the hazards of immobility in body organs and their association with the disease, has no positive effect on their physical activity.

This issue reveals the need for a more precise planning in relation with a sort of students' practical education which can lead to changes in their behavior.

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